Acetyl Podocarpic Acid Anhydride
Item No. 10007686

CAS Registry No.: 344237-48-6
Formal Name: 6-(acetyloxy)-1,2,3,4,4a,9,10,10a-octahydro-1,4a-dimethyl-1-phenanthrenecarboxylic acid, anhydride

Synonym: APD
MF: C_{38}H_{46}O_{7}
FW: 614.8
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis: λ_{max} 208, 268 nm

Laboratory Procedures

For long term storage, we suggest that acetyl podocarpic acid anhydride (APD) be stored as supplied at -20°C. It should be stable for at least two years.

APD is supplied as a crystalline solid. A stock solution may be made by dissolving the APD in an organic solvent purged with an inert gas. APD is soluble in the organic solvent dimethyl formamide (DMF). The solubility of APD in DMF is approximately 1 mg/ml.

If aqueous stock solutions are required for biological experiments, they can be best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

The liver X receptors (LXR\textsubscript{a} and LXR\textsubscript{b}) are nuclear hormone receptors whose native ligands are oxysterols.\textsuperscript{1} APD is a potent, semi-synthetic LXR agonist derived from extracts of the mayapple. APD acting through LXR in concert with the retinoid X receptor (RXR), its heterodimerization partner, induces the expression of the ABCA1 reverse cholesterol transporter.\textsuperscript{2} This acts to increase the efflux of cholesterol from enterocytes and thus inhibits the overall absorption of cholesterol (ED\textsubscript{50} value of 1 nM).\textsuperscript{3} In transient transactivation assays, APD was found to be approximately 1,000 times more potent and have 8 to 10-fold greater maximal stimulation of LXR than 22(R)-hydroxy cholesterol.\textsuperscript{3,4} APD can be used as a positive control for the testing of LXR agonists, which have potential as therapeutic agents for the treatment of atherosclerosis.

References


Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10007686

**WARNING:** This product is for laboratory research only; not for administration to humans, not for human or veterinary diagnostic or therapeutic use.

**MATERIAL SAFETY DATA**

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent with this material.

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